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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,644	04/15/2004	Christopher J. Stone	D3125	8994

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GENERAL INSTRUMENT CORPORATION DBA THE CONNECTED  
HOME SOLUTIONS BUSINESS OF MOTOROLA, INC.  
101 TOURNAMENT DRIVE  
HORSHAM, PA 19044

EXAMINER
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DALEY, CHRISTOPHER ANTHONY

ART UNIT	PAPER NUMBER
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2111

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.		Applicant(s)	
	10/825,644		STONE, CHRISTOPHER J.	
	Examiner		Art Unit	
	Christopher A. Daley		2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. Claims 1 – 20 are pending.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 5, 13 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun (US6826699) in view of Ono et al (US6505264) hereinafter Ono.

3. As to claim 1, Sun discloses a method for automatically establishing an isochronous signal for transmission to a signal receiving device, the method comprising: using a serial bus responsive to a set-top device (Figure 2 illustrates a source 210, which can be a set top box, coupled to sink 220 via a IEEE 1394 bus. Said source device is capable of transmitting digital signal, such as a DTV signal which is inherently isochronous (Col. 5, line 49- COL.6, line 14). Figure 5, step 510 illustrates a configuration transaction between the sourcing device and the receiving device, COL. 7, lines 50 – 58);

without user intervention, based on the discovered signal receiving capability, producing an isochronous signal for transmission to the first signal receiving device over the serial bus (Figure 5 illustrate in steps 510 and 550 setting up and transmitting

Art Unit: 2111

a isochronous signal over said IEEE 1394 bus when the configuration is complete, COL. 7, line 53 – COL. 8, line 40).

Sun does not disclose discovering a signal receiving capability of the first signal receiving device, wherein the discovering occurs by having the first signal receiving device broadcasting self-ID packets over the serial bus and the set top device establishing an asynchronous transaction with the first signal receiving device so as to receive configuration data from the first signal receiving device.

However, Ono teaches discovering a signal receiving capability of the first signal receiving device, wherein the discovering occurs by having the first signal receiving device broadcasting self-ID packets over the serial bus and the set top device establishing an asynchronous transaction with the first signal receiving device so as to receive configuration data from the first signal receiving device. Ono teaches of a system transmitting information over a serial bus to configure a device with the help of a initialization detecting device. Detecting device receives self-ID packets and perform said configuration, COL.4, lines 1 – 10. Said initialization is well known in the art as asynchronous transaction. When said configuration is complete, isochronous transaction can occur as illustrated in figure 3. It would have been obvious to one of ordinary skill in the art to use the configuration scheme of Ono in Sun to configure to ensure proper configuration of involved devices, COL. 23, lines 15 – 25. One of ordinary skill in the art would have been motivated to use the configuration scheme of Ono in Sun as it assures appropriate configuration for isochronous transmission, COL. 23, lines 15 – 25.

Art Unit: 2111

4. As to claim 2, Sun discloses the method, further comprising: transmitting the produced isochronous signal to the first signal receiving device over the serial bus (Figure 5, step 550 illustrates said limitation, Col. 8, lines 30 – 41).

5. As to claim 3, Sun discloses the method according to claim 1, further comprising: providing the serial bus between the first signal receiving device and a second signal receiving device (Figure 5, step 510 illustrate said limitation, Col. 8, lines 42 - 50); and discovering a signal receiving capability of the second signal receiving device (Figure 5, step 550 illustrate said limitation, Col. 8, lines 42 - 50).

6. As to claim 4, Sun discloses the method, wherein the step of producing the isochronous signal for transmission comprises producing the isochronous signal for transmission to one of the first and second signal receiving devices (Multiple sink devices receive isochronous signals, Col. 8, lines 43 – 60).

7. As to claim 5, Sun discloses the method, wherein the set-top device supports a single isochronous point-to-point connection on the serial bus (Figure 2 illustrates a STB 210 coupled to sink device 220 over a point to point connection, COL, 6, lines 15 – 30).

8. As to claim 13, Sun discloses a computer-readable storage medium encoded with a computer program which, when loaded into a processor, implements the method

of claim 1 (Figure 1 illustrates a RAM 102, which stores the computer program that executes said method, COL. 4, lines 55 – 67).

9. As to claim 14, Sun discloses an apparatus for automatically establishing an isochronous signal for transmission to a signal receiving device, the apparatus comprising: a computer-readable storage medium (Figure 1, unit 102, COL. 4, lines 60 – 67); and a processor responsive to the computer-readable storage medium and to a computer program, the computer program, when loaded into the processor, operative to perform a method comprising: (Figure 1 illustrates processor 101 responsive to storage medium 102 that stores program that executes said method, (COL. 4, lines 60 – 67);

without user intervention, based on the discovered signal receiving capability, producing an isochronous signal for transmission to the signal receiving device over the serial bus (Figure 5 illustrate in steps 510 and 550 setting up and transmitting a isochronous signal over said IEEE 1394 bus, COL. 7, line 53 – COL. 8, line 40).

Using a serial bus responsive to a set-top device and the signal receiving device, Sun does not disclose discovering a signal receiving capability of the first signal receiving device, wherein the discovering occurs by having the first signal receiving device broadcasting self-ID packets over the serial bus and the set top device establishing an asynchronous transaction with the first signal receiving device so as to receive configuration data from the first signal receiving device.

However, Ono teaches discovering a signal receiving capability of the first signal receiving device, wherein the discovering occurs by having the first signal receiving device broadcasting self-ID packets over the serial bus and the set top device establishing an asynchronous transaction with the first signal receiving device so as to receive configuration data from the first signal receiving device. Ono teaches of a system transmitting information over a serial bus to configure a device with the help of a initialization detecting device. Detecting device receives self-ID packets and perform said configuration, COL.4, lines 1 – 10. Said initialization is well known in the art as asynchronous transaction. When said configuration is complete, isochronous transaction can occur as illustrated in figure 3. It would have been obvious to one of ordinary skill in the art to use the configuration scheme of Ono in Sun to configure to ensure proper configuration of involved devices, COL. 23, lines 15 – 25. One of ordinary skill in the art would have been motivated to use the configuration scheme of Ono in Sun as it assures appropriate configuration for isochronous transmission, COL. 23, lines 15 – 25.

As to claim 15, Sun discloses a set-top device for use within a broadband communications system, comprising: an interface to a serial bus, the serial bus responsive to a signal receiving device (Figure 1 illustrates an interface 108 to serial bus 120. Said serial bus is connected to a sink device 220 as illustrated in figure 2. The architecture is IEEE 1394, COL. 6, lines 15 – 30); a processor (Figure 1, processor 101);

Art Unit: 2111

a computer readable storage medium encoded with a computer program which, when loaded into the processor, is operative to perform a method comprising: discovering a signal receiving capability of the signal receiving device (Figure 1 illustrates processor 101 responsive to storage medium 102 that stores program that executes said method, (COL. 4, lines 60 – 67) ; and without user intervention, based on the discovered signal receiving capability, producing an isochronous signal for transmission to the signal receiving device via the interface to the serial bus (Figure 5 illustrate in steps 510 and 550 setting up and transmitting a isochronous signal over said IEEE 1394 bus, COL. 7, line 53 – COL. 8, line 40).

Sun does not disclose discovering a signal receiving capability of the first signal receiving device, wherein the discovering occurs by having the first signal receiving device broadcasting self-ID packets over the serial bus and the set top device establishing an asynchronous transaction with the first signal receiving device so as to receive configuration data from the first signal receiving device.

However, Ono teaches discovering a signal receiving capability of the first signal receiving device, wherein the discovering occurs by having the first signal receiving device broadcasting self-ID packets over the serial bus and the set top device establishing an asynchronous transaction with the first signal receiving device so as to receive configuration data from the first signal receiving device. Ono teaches of a system transmitting information over a serial bus to configure a device with the help of a initialization detecting device. Detecting device receives self-ID packets and perform



Art Unit: 2111

said configuration, COL.4, lines 1 – 10. Said initialization is well known in the art as asynchronous transaction. When said configuration is complete, isochronous transaction can occur as illustrated in figure 3. It would have been obvious to one of ordinary skill in the art to use the configuration scheme of Ono in Sun to configure to ensure proper configuration of involved devices, COL. 23, lines 15 – 25. One of ordinary skill in the art would have been motivated to use the configuration scheme of Ono in Sun as it assures appropriate configuration for isochronous transmission, COL. 23, lines 15 – 25.

10. As to claim 16, Sun discloses the set-top device according to claim 15, wherein the set-top device comprises one of a cable set-top device and a terrestrial set-top device (Figure 1 illustrates a system that can take on a plurality of embodiments, such as cable or terrestrial set-top devices, COL. 4, lines 45 – 51).

11. As to claim 17, Sun discloses the set-top device according to claim 16, wherein the isochronous signal comprises a displayable digital television signal (Figure 1 illustrates a device that transmits digital content, that comprises a digital television signal for a on –screen display for sink device such as digital TV, COL. 4, lines 42 – lines 48).

12. As to claim 18, Sun discloses the method according to claim 17, wherein the displayable digital television signal comprises one of an on-screen display and a signal

Art Unit: 2111

for recording by a recording device (Figure 1 illustrates a device that transmits digital content, that comprises a digital television signal for a on-screen display for sink device such as digital TV and a signal for a recording device such as a digital video cassette recorder, COL. 4, lines 42 – lines 52).

13. As to claim 19, Sun discloses the set-top device according to claim 16, wherein the signal receiving device comprises one of a display device; a digital video cassette recorder; a hard disk drive; a digital video camera recorder; and a digital video disk recorder (Figure 1 illustrates the plurality of receiving devices that comprises said devices, COL. 4, lines 45 – 52).

14. As to claim 20, Sun discloses the set-top device according to claim 19, wherein the broadband communications system comprises a cable television system (Figure 2 illustrates said cable television system comprising a communication network 200, COL. 5, line 63 – Col. 6, line 14).

### ***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2111

16. Claims 7 – 8, 10 - 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun in view of Ono and in further view of Shintani et al (US2003/0067558) hereinafter Shintani.

17. As to claim 7, Sun as modified by Ono does not disclose the method, wherein digital content is transmittable from the set-top device to the first signal receiving device via the serial bus, and wherein analog content is transmittable from the set-top device to the first signal receiving device via an analog interface.

However, Shatani teaches wherein digital content is transmittable from the set-top device to the first signal receiving device via the serial bus, and wherein analog content is transmittable from the set-top device to the first signal receiving device via an analog interface. One of ordinary skill in the art at the time of the invention to combine the teachings of Sun/Ono and Shintani because the analog signal provides on screen information from a set top device to a HDTV device without greatly increasing the cost to the system, (page 2, paragraph 0013).

Figure 1 illustrates a set-top device that transmits a digital signal to a HDTV device, and also transmits a separate analog signal to said HDTV device.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Sun and Shintani because the analog signal provides on screen information from a set top device to a HDTV device without greatly increasing the cost to the system, (page 2, paragraph 0013).

Art Unit: 2111

The motivation for modifying Sun by Shintani would have been obvious because one having ordinary skill in the art would want to use display both analog and digital signal on HDTV unit, (page 2, paragraph 0013).

18. As to claim 8, Shintani discloses the method, further comprising: determining if the first signal receiving device is responsive to the analog interface (Figure 3 illustrates the signal receiving device receiving signal 170 from STB into multi-processor unit 390, that is sent to the HDTV monitor 380, page 3, paragraph 0031).

19. As to claim 10, Shintani discloses the method, wherein the step of determining comprises assuming the first signal receiving device is not responsive to the analog interface (Auto detect device of 370 senses the presence or absence of analog signal, page 3, paragraph 0032).

20. As to claim 11 and 12, Shintani discloses the method according to claim 8, further comprising: when the first signal receiving device is not responsive to the analog interface, producing a message for transmission to the first signal receiving device over the serial Bus (An external trigger can be sent in the serial digital stream with requisite message, to be displayed on digital HDTV monitor, page 3, paragraph 0033).

21. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sun in view of Ono in further view of Shintani and in further view of Van Vignau et al (US6359655) hereinafter Van Vignau.

22. As to claim 9, Sun as modified by Ono as modified by Shintani does not disclose the method, wherein the step of determining comprises measuring a resistance associated with the analog interface.

However, Van Vignau teaches the method, wherein the step of determining comprises measuring a resistance associated with the analog interface. Figure 1 illustrates an analog interface coupled to a TV monitor, whose analog signal is controlled by software A/D converter, where the measurement of a resistor determines the signal capability, COL. 6, lines 15 – 35. Van Vignau delivers a means to control of video text for on screen, COL. 6, lines 58 – 65.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Sun/Ono/Shintani with Van Vignau as Van Vignau delivers a flexible means of controlling the analog interface, COL. 1, lines 6 – 13. One of ordinary skill in the art would be motivated to combine these teachings as there is a need that Van Vignau delivers to control of video text for on screen, COL. 6, lines 58 – 65. The motivation for combining Sun/Ono/Shintani with Van Vignau would have been obvious because one of ordinary skill in the art would want a means to control the display of text on screen, Col. 6, lines 58 – 65.

23. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sun in view of Ono in further view of Shintani and in further view of Van Vignau and in further view of Auerbach (US6832253).

24. As to claim 6, Sun does not disclose the method further comprising: determining which one of the first signal receiving device and the second signal receiving device is closest to the set-top box device by causing a ping packet to be sent to the first signal receiving device and the second signal receiving device, and measuring an amount of time it takes for each the first and second signal receiving devices to return data based on the ping packet; and base on the amount of time, producing the isochronous signal for transmission to the signal receiving device closest to the set-top box.

However, Auerbach teaches the method further comprising: determining which one of the first signal receiving device and the second signal receiving device is closest to the set-top box device by causing a ping packet to be sent to the first signal receiving device and the second signal receiving device, and measuring an amount of time it takes for each the first and second signal receiving devices to return data based on the ping packet; and base on the amount of time, producing the isochronous signal for transmission to the signal receiving device closest to the set-top box as illustrated in Figure 2B. Said method determines the proximity in time between the client and the server and then choose the server based on the closer proximity, COL. 7, lines 18 - 62. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the proximity method of Auerbach with the system of Sun to optimize the delivery of content to users based on server proximity, COL. 2, lines 4 – 8. One of ordinary skill

Art Unit: 2111

in the art would have been motivated to see the proximity method of Auerbach with the system of Sun to optimize the delivery of content to users based on server proximity, COL. 2, lines 4 – 8.

***Response to Arguments***

25. Applicant's arguments with respect to claims 1, 14, and 15 have been considered but are moot in view of the new ground(s) of rejection. Applicant amended the claim to eliminate the indefinite nature of claim's prior rendition. However new ground for rejection has been established for new limitation. Namely, applicant detailed the configuration process of discovering a signal receiving capability of the first signal receiving device, wherein the discovering occurs by having the first signal receiving device broadcasting self-ID packets over the serial bus and the set top device establishing an asynchronous transaction with the first signal receiving device so as to receive configuration data from the first signal receiving device.

New reference Ono teaches discovering a signal receiving capability of the first signal receiving device, wherein the discovering occurs by having the first signal receiving device broadcasting self-ID packets over the serial bus and the set top device establishing an asynchronous transaction with the first signal receiving device so as to receive configuration data from the first signal receiving device. Ono teaches of a system transmitting information over a serial bus to configure a device with the help of a initialization detecting device. Detecting device receives self-ID packets and perform said configuration, COL.4, lines 1 – 10. Said initialization is well known in the art as asynchronous transaction. When said configuration is complete, isochronous

Art Unit: 2111

transaction can occur as illustrated in figure 3. It would have been obvious to one of ordinary skill in the art to use the configuration scheme of Ono in Sun to configure to ensure proper configuration of involved devices, COL. 23, lines 15 – 25. One of ordinary skill in the art would have been motivated to use the configuration scheme of Ono in Sun as it assures appropriate configuration for isochronous transmission, COL. 23, lines 15 – 25.

### ***Conclusion***

26. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Daley whose telephone number is 571 272 3625. The examiner can normally be reached on 9 am. - 4p m.



Art Unit: 2111

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 571 272 3632. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CAD  
7/18/2006

A handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke extending to the right.

MARK H. RINEHART  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100